AMENDMENTS TO THE CLAIMS

1   1.   (currently amended) A method for ~~configuring~~ accessing data objects from a data

2   repository from ~~to~~ a plurality of data repositories, ~~the data repositories~~ that each

3   ~~providing~~ comprises a plurality of data objects, the method comprising:

4   receiving a request to access data objects stored in a specified one of the plurality of

5   data repositories, the request including a parameter that specifies the data

6   objects;

7   wherein at least two of the plurality of data repositories are configured with different

8   data objects and data object relationships;

9   identifying, based on the parameter, metadata that characterizes at least a portion of

10   the data objects in the specified data repository, from a plurality of metadata

11   that each characterizes a configuration for the data objects in a data repository;

12   retrieving the metadata that characterizes at least a portion of the plurality of data

13   objects in ~~each~~ the specified data repository; ~~and~~

14   generating, based on the metadata that characterizes at least a portion of the plurality

15   of data objects in the specified data repository, a reconfigured request to

16   access the data objects stored in the specified data repository; and

17   using the reconfigured request, signaling a selection for one or more data objects from

18   the ~~plurality of data repositories~~ specified data repository ~~based on the~~

19   ~~parameter in the request and the metadata.~~

1   2.   (canceled)

1   3.   (canceled)

1   4.   (canceled)

1   5.   (currently amended) The method of claim 1,

2   ~~wherein retrieving metadata includes identifying metadata from the request that characterizes~~

3   ~~a configuration for data objects in each data repository, wherein the configuration of~~

4   ~~each data repository indicates a relationship amongst at least a portion of the data~~

5   ~~objects in the plurality of data objects of each data repository, and wherein the~~

6   ~~configuration for at least some of the data repositories are different; and~~

7   wherein signaling a selection for one or more data objects from the ~~plurality of data~~

8   ~~repositories~~ <u>specified data repository</u> includes:

9   ~~generating a reconfigured request for each data repository in the plurality of data~~

10   ~~repositories, each reconfigured request being generated using metadata that~~

11   ~~characterizes the configuration of that data repository, and~~

12   modifying the ~~selected~~ one or more data objects from the ~~plurality of data repositories~~

13   <u>specified data repository</u> using the reconfigured request[[s]].

1   6.   (currently amended) The method of claim 1,

2   ~~wherein retrieving metadata includes identifying metadata from the request that characterizes~~

3   ~~a configuration for data objects in each data repository, wherein the configuration of~~

4   ~~each data repository indicates a relationship amongst at least a portion of the data~~

5   ~~objects in the plurality of data objects of each data repository, and wherein the~~

6   ~~configuration for at least some of the data repositories are different; and~~

7   wherein signaling a selection for one or more data objects from ~~plurality of data repositories~~

8   <u>specified data repository</u> includes:

9   ~~generating a reconfigured request for each data repository in the plurality of data~~

10   ~~repositories, each reconfigured request being generated using metadata that~~

11   ~~characterizes the configuration of that data repository; and~~

12   deleting the selected one or more data objects from the ~~plurality of data repositories~~

13   specified data repository using the reconfigured request[[s]].

1   7.   (currently amended) The method of claim 1,

2   ~~wherein retrieving metadata includes identifying metadata from the request that characterizes~~

3   ~~a configuration for data objects in each data repository, wherein the configuration of~~

4   ~~each data repository indicates a relationship amongst at least a portion of the data~~

5   ~~objects in the plurality of data objects of each data repository, and wherein the~~

6   ~~configuration for at least some of the data repositories are different; and~~

7   wherein signaling a selection for one or more data objects from the ~~plurality of data~~

8   ~~repositories~~ specified data repository includes:

9   ~~generating a reconfigured request for each data repository in the plurality of data~~

10   ~~repositories, each reconfigured request being generated using metadata that~~

11   ~~characterizes the configuration of that data repository, and~~

12   creating one or more data objects using the reconfigured request, the data objects

13   being created in ~~plurality of data repositories~~ the specified data repository

14   according to the configuration for the data objects in ~~that~~ the specified data

15   repository.

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1   8.   (original) The method of claim 1, wherein identifying metadata based on the

2   parameter in the request includes accessing a storage medium to retrieve metadata

3   specified by the parameter in the request.

1   9.   (currently amended) The method of claim 1, wherein retrieving metadata includes

2   identifying, from the request, metadata ~~from the request~~ that characterizes a

3   configuration for data objects in each data repository, the configuration of each data

4   repository indicating a class of data objects in each data repository that share an

5   attribute.

1   10.   (currently amended) The method of claim 1, wherein retrieving metadata includes

2   identifying, from the request, metadata ~~from the request~~ that characterizes a

3   configuration for data objects in each data repository, the configuration of each data

4   repository indicating an auxiliary class of data objects.

1   11.   (currently amended) The method of claim 1,

2   wherein retrieving metadata includes identifying a metadata structure from the request that

3   identifies a plurality of auxiliary classes for each data repository; and

4   wherein signaling a selection for one or more data objects ~~from the plurality of data~~

5   ~~repositories~~ includes determining whether the parameter is a valid feature of at least

6   one of the plurality of auxiliary classes.

1   12.   (currently amended) The method of claim 1, further comprising:

2   identifying one or more auxiliary classes for each data repository, each auxiliary class

3   including at least one data object having an attribute and a value for that attribute, the

4   value for that attribute further being modified by an auxiliary value that can only be

5   associated with the attribute by modifying the value of that attribute; and

6   associating a metadata structure with each auxiliary class;

7   wherein retrieving metadata includes identifying the metadata structure from the request that

8   identifies the one or more auxiliary classes for each data repository; and

9   wherein signaling a selection includes signaling a selection for one or more data objects from

10   the plurality of data repositories includ[[es]]ing determining whether the parameter is

11   valid for the attribute, the value for the attribute, or the auxiliary value for the

12   attribute.

1   13.   (currently amended) The method of claim 1, wherein retrieving metadata includes

2   identifying, from the request, metadata from the request that characterizes a

3   configuration for data objects in each data repository, the configuration of each data

4   repository indicating select data objects of each data repository that are linked to

5   other data objects.

1   14.   (currently amended) The method of claim 1, wherein retrieving metadata includes

2   identifying, from the request, metadata from the request that identifies a plurality of

3   linked data objects for each data repository, each of the plurality of linked data

4   objects referencing another data object in the data repository; and wherein the method

5   further includes associating the metadata structure with the plurality of linked data

6   objects.

1   15.   (currently amended) The method of claim 1,

2   wherein retrieving metadata includes identifying, from the request, a metadata structure from

3   the request that identifies a plurality of linked data objects for each data repository,

4   each linked data object referencing a counterpart data object in the data repository;

5   and

6   wherein signaling a selection for one or more data objects from the plurality of data

7   repositories using the metadata structure includes signaling a selection for one or

8   more linked data objects, and using the metadata structure to identify the counterpart

9   data object referenced by each linked data object.

1   16.   (currently amended) The method of claim 1,

2   wherein retrieving metadata includes, from the request, a metadata structure from the request

3   that identifies an inheritable attribute for a plurality of data objects in at least one of

4   the plurality of data repositories, the inheritable attribute being located in at least one

5   superior data object; and

6   wherein signaling a selection for one or more data objects from the plurality of data

7   repositories includes determining that the parameter specifies the inheritable attribute,

8   and selecting a class of data objects that share the inheritable attribute.

1   17.   (currently amended) A computer system coupleable to an application and to a

2   plurality of data repositories, the application signaling the computer system a request

3   to access a plurality of data objects from a particular data repository of the plurality of

4   data repositories, the computer system comprising:

5   a storage medium that stores ~~at least a first~~ a plurality of metadata structures that each

6   characterizes a configuration of~~, the first metadata structure characterizing~~ multiple

7   data objects in ~~each~~ a respective data repository; and

8   a processing resource that is configured to identify and use ~~the~~ a first metadata structure from

9   the plurality of metadata structures to select one or more data objects from the

10   ~~plurality of data repositories~~ particular data repository in response to an application

11   request to access data objects from ~~a~~ the particular data repository.

1 18.   (original) The computer system of claim 17, wherein the metadata structure

2   characterizes, for each data repository, a configuration for how select data objects

3   relate to other data objects in the plurality of data objects of that data repository.

1 19.   (original) The computer system of claim 17, wherein the first metadata structure

2   includes a plurality of metadata items, and wherein the processing resource identifies

3   a parameter in the request, uses the parameter to identify a first metadata item in the

4   first metadata structure, and selects the one or more data objects using the first

5   metadata item.

1 20.   (original) The computer system of claim 17, wherein the metadata structure includes

2   a plurality of metadata items, and wherein the processing resource identifies a

3   parameter in the request, uses the parameter to identify a first metadata item in the

4   metadata structure, selects the one or more data objects using the first metadata item,

5   and performs an operation specified in the request to access the data repositories on

6   the selected one or more data objects.

1   21.   (original) The computer system of claim 17, wherein the first metadata structure

2   identifies data objects in each data repository that are linked to other data objects.

1   22.   (original) The computer system of claim 17, wherein the first metadata structure

2   identifies one or more linked data objects in the data repositories, the linked data

3   objects referencing other data objects in the data repository, and wherein the first

4   metadata structure identifies the other data objects references by the linked data

5   objects.

1   23.   (original) The computer system of claim 17, wherein the first metadata structure

2   identifies one or more linked data objects in the data repositories, the linked data

3   objects referencing other data objects in the data repository, and wherein the first

4   metadata structure identifies the other data objects references by the linked data

5   objects, and wherein the processing resources identify an operation from the request

6   to access the plurality of data repositories, and wherein the processing resources

7   implement that operation on the linked data objects and the other data objects that

8   reference the linked data objects.

1   24.   (original) The computer system of claim 17, wherein the first metadata structure

2   identifies an auxiliary class of data objects in the plurality of data objects of each data

3   repository, the auxiliary class of data objects including an auxiliary characteristic that

4   modifies and is dependent on another characteristic of a data object in the auxiliary

5   class of data objects.

1 25. (original) The computer system of claim 17, wherein the first metadata structure

2   identifies an auxiliary class of data objects in the plurality of data objects of each data

3   repository, the auxiliary class of data objects including an auxiliary characteristic that

4   modifies and is dependent on another characteristic of a data object in the auxiliary

5   class of data objects, and wherein the processing resource identifies a parameter in the

6   request, uses the parameter to identify the auxiliary class for one or more of the data

7   repositories, and selects the one or more data objects that are in the auxiliary class.

1 26. (original) The computer system of claim 17, The computer system of claim 10,

2   wherein the first metadata structure identifies an auxiliary class of data objects in the

3   plurality of data objects of each data repository, the auxiliary class of data objects

4   including an auxiliary characteristic that modifies and is dependent on another

5   characteristic of a data object in the auxiliary class of data objects, and wherein the

6   processing resource identifies a parameter in the request, uses the parameter to

7   identify the auxiliary class for one or more of the data repositories, selects the one or

8   more data objects that are in the auxiliary class, and performs an operation identified

9   by the request to access the data repositories on the one or more data objects in the

10   auxiliary class.

1 27. (original) The computer system of claim 17, wherein the first metadata structure

2   identifies an inheritable attribute shared by data objects in an object class of each data

3   repository.

1   28.   (original) The computer system of claim 17, wherein the first metadata structure

2   identifies an inheritable attribute shared by data objects in an object class, and

3   wherein the first metadata structure identifies a superior data object class and a

4   subordinate object class for the object class having the inheritable attribute.

1   29.   (original) The computer system of claim 17, wherein the first metadata structure

2   identifies an inheritable attribute shared by data objects in an object class, and

3   identifies a superior data object and a subordinate object class for the object class

4   having the inheritable attribute, and wherein the processing resources are configured

5   to identify the inheritable attribute from the request, to identify an operation specified

6   in the request, to identify the object class having the inheritable attribute, and to apply

7   the operation to the object class having the inheritable attribute.

1   30.   (currently amended) A computer-readable medium carrying sequences of instructions

2   for ~~configuring~~ accessing data objects from a data repository from ~~to~~ a plurality of

3   data repositories that provide a plurality of data objects, the sequences of instructions

4   including instructions for performing the steps of:

5   receiving a request to access data objects stored in <u>a specified one of</u> the plurality of

6   data repositories, the request including a parameter<u> that specifies the data</u>

7   <u>objects</u>;

8   <u>wherein at least two of the plurality of data repositories are configured with different</u>

9   <u>data objects and data object relationships</u>;

10   identifying, based on the parameter, metadata that characterizes at least a portion of

11   the data objects in the specified data repository, from a plurality of metadata

12   that each characterizes a configuration for the data objects in a data repository;

13   retrieving the metadata that characterizes at least a portion of the plurality of data

14   objects in ~~each~~ the specified data repository; ~~and~~

15   generating, based on the metadata that characterizes at least a portion of the plurality

16   of data objects in the specified data repository, a reconfigured request to

17   access the data objects stored in the specified data repository; and

18   using the reconfigured request, signaling a selection for one or more data objects from

19   the ~~plurality of data repositories~~ specified data repository ~~based on the~~

20   ~~parameter in the request and the metadata.~~

1   31.   (canceled)

1   32.   (canceled)

1   33.   (canceled)

1   34.   (currently amended) The computer medium of claim 30, further comprising

2   instructions for performing the steps of:

3   ~~identifying metadata from the request that characterizes a configuration for data objects in~~

4   ~~each data repository, wherein the configuration of each data repository indicates a~~

5   ~~relationship amongst at least a portion of the data objects in the plurality of data~~

6   ~~objects of each data repository, and wherein the configuration for at least some of the~~

7   ~~data repositories are different; and~~

8 ~~generating a reconfigured request for each data repository in the plurality of data repositories,~~

9 ~~each reconfigured request being generated using metadata that characterizes the~~

10 ~~configuration of that data repository, and~~

11 modifying the ~~selected~~ one or more data objects from the ~~plurality of data repositories~~

12 specified data repository using the reconfigured request[[s]].

1 35. (currently amended) The computer-readable medium of claim 30, further comprising

2 instructions for performing the steps of:

3 ~~identifying metadata from the request that characterizes a configuration for data objects in~~

4 ~~each data repository, wherein the configuration of each data repository indicates a~~

5 ~~relationship amongst at least a portion of the data objects in the plurality of data~~

6 ~~objects of each data repository, and wherein the configuration for at least some of the~~

7 ~~data repositories are different; and~~

8 ~~generating a reconfigured request for each data repository in the plurality of data repositories,~~

9 ~~each reconfigured request being generated using metadata that characterizes the~~

10 ~~configuration of that data repository; and~~

11 deleting the selected one or more data objects from the ~~plurality of data repositories~~ specified

12 data repository using the reconfigured request[[s]].

1 36. (currently amended) The computer-readable medium of claim 30, further comprising

2 instructions for performing the steps of:

3 ~~identifying metadata from the request that characterizes a configuration for data objects in~~

4 ~~each data repository, wherein the configuration of each data repository indicates a~~

5 ~~relationship amongst at least a portion of the data objects in the plurality of data~~

6   ~~objects of each data repository, and wherein the configuration for at least some of the~~

7   ~~data repositories are different; and~~

8   ~~generating a reconfigured request for each data repository in the plurality of data repositories,~~

9   ~~each reconfigured request being generated using metadata that characterizes the~~

10   ~~configuration of that data repository, and~~

11   creating one or more data objects using the reconfigured request, the data objects being

12   created in ~~plurality of data repositories~~ the specified data repository according to the

13   configuration for the data objects in ~~that~~ the specified data repository.

1   37.   (currently amended) A computer system for ~~configuring~~ accessing data objects

2   from a data repository from ~~to~~ a plurality of data repositories that provide a

3   plurality of data objects, the computer system comprising:

4   means for receiving a request to access data objects stored in a specified one of

5   the plurality of data repositories, the request including a parameter that

6   specifies the data objects;

7   wherein at least two of the plurality of data repositories are configured with

8   different data objects and data object relationships;

9   means for identifying, based on the parameter, metadata that characterizes at least

10   a portion of the data objects in the specified data repository, from a

11   plurality of metadata that each characterizes a configuration for the data

12   objects in a data repository;

13   means for retrieving the metadata that characterizes at least a portion of the

14   plurality of data objects in ~~each~~ the specified data repository; ~~and~~

14

15   means for generating, based on the metadata that characterizes at least a portion of

16   the plurality of data objects in the specified data repository, a reconfigured

17   request to access the data objects stored in the specified data repository;

18   and

19   means for using the reconfigured request to signal[[ing]] a selection for one or

20   more data objects from the ~~plurality of data repositories~~ specified data

21   repository ~~based on the parameter in the request and the metadata~~.

1 38. (new) The method of claim 1, wherein the plurality of data repositories store

2   hierarchical directories of data objects.

1 39. (new) The method of claim 38, wherein the hierarchical directories are accessible

2   using the Lightweight Directory Access Protocol (LDAP).

1 40. (new) The computer-readable medium of claim 30, wherein the plurality of data

2   repositories store hierarchical directories of data objects.

1 41. (new) The computer-readable medium of claim 40, wherein the hierarchical

2   directories are accessible using the Lightweight Directory Access Protocol

3   (LDAP).

1 42. (new) A system comprising:

2   a network interface that is coupled to a network for receiving one or more packet

3   flows therefrom;

4   a processor;

5   one or more stored sequences of instructions which, when executed by the processor,

6   cause the processor to perform

7   receiving a request to access data objects stored in a specified one of a

8   plurality of data repositories, the request including a parameter that

9   specifies the data objects;

10   wherein at least two of the plurality of data repositories are configured with

11   different data objects and data object relationships;

12   identifying, based on the parameter, metadata that characterizes at least a

13   portion of the data objects in the specified data repository, from a

14   plurality of metadata that each characterizes a configuration for the

15   data objects in a data repository;

16   retrieving the metadata that characterizes at least a portion of the plurality of

17   data objects in the specified data repository;

18   generating, based on the metadata that characterizes at least a portion of the

19   plurality of data objects in the specified data repository, a reconfigured

20   request to access the data objects stored in the specified data

21   repository; and

22   using the reconfigured request, signaling a selection for one or more data

23   objects from the specified data repository.

1   43.   (new) A method for accessing a plurality of data repositories that each comprises

2   a plurality of data objects, the method comprising:

16

3   receiving a request to access data objects stored in data repositories, the request

4   including a parameter that specifies the data objects, wherein at least two

5   of the plurality of directories are configured with different semantics,

6   syntax, and data object relationships;

7   identifying, based on the parameter, a plurality of metadata that each characterizes

8   at least a portion of a configuration for the data objects in respective data

9   repositories;

10   retrieving the plurality of metadata;

11   creating, based on the plurality of metadata, reconfigured requests to access the

12   data objects stored in the respective data repositories;

13   using the reconfigured requests to signal a selection for the data objects from the

14   respective data repositories.

1   44.   (new) The method of claim 43, wherein the plurality of data repositories store

2   hierarchical directories of data objects.

1   45.   (new) A computer-readable medium carrying sequences of instructions for

2   accessing a plurality of data repositories that each comprises a plurality of data

3   objects, the sequences of instructions which, when executed, cause one or more

4   processors to perform the steps of:

5   receiving a request to access data objects stored in data repositories, the request

6   including a parameter that specifies the data objects, wherein at least two

7   of the plurality of directories are configured with different semantics,

8   syntax, and data object relationships;

9   identifying, based on the parameter, a plurality of metadata that each characterizes

10   at least a portion of a configuration for the data objects in respective data

11   repositories;

12   retrieving the plurality of metadata;

13   creating, based on the plurality of metadata, reconfigured requests to access the

14   data objects stored in the respective data repositories;

15   using the reconfigured requests to signal a selection for the data objects from the

16   respective data repositories.